DOCUMENT RESUME

ED 324 610 CG 022 870

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TITLE	We Teach Them How To Drink!
INSTITUTION	Exeter Univ. (England). School of Education. HEA Schools Health Education Unit.
SPONS AGENCY	Health Education Authority, London (England).
REPORT NO	ISBN-85068-108-1
PUB DATE	89
NOTE	33p.; Based on a paper presented at the Conference "Alcohol, Young People, and Health Education" (July 6, 1989).
PUB TYPE	Reports - Research/Technical (143) -- Speeches/Conference Papers (150)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	*Adolescents; *Alcohol Abuse; *Drinking; Elementary Secondary Education; Foreign Countries; *Incidence; *Preadolescents; Sex Differences; Trend Analysis
IDENTIFIERS	*United Kingdom

ABSTRACT

Since 1983 the Health Education Authority Schools Education Unit has been providing a survey service to schools throughout the United Kingdom. The purpose is to make the planning of programs in Health and Social Education in the schools more realistic. Health behaviors in the areas of substance use, dental care, diet, homework, jobs, leisure, medication, money, physical activity, road use, self-esteem, sharing problems, social activities, smoking, sleeping times, and television habits were examined. The 1988 sample included 33,459 students between the ages of 11 and 16. This document focuses on alcohol-related statistics. Discussion of results in these areas is presented: (1) age of onset of regular drinking; (2) percentage of boys and percentage of girls who consumed shandy, beer or lager, cider, wine, fortified wine, or spirits; (3) percentage of children who obtained alcoholic drinks from home, a pub or bar, supermarket, off-licence, friend's home, relative's home, or disco or party; (4) number of alcoholic units consumed by boys and by girls in the past 7 days; (5) alcohol use by young people aged 14 and over; (6) alcohol consumption and road use; (7) alcohol consumption and socially-related variables; (8) alcohol consumption and hygiene variables; (9) alcohol consumption and the home; (10) alcohol consumption and diet; (11) alcohol consumption and drug use; and (12) alcohol consumption and sports activities. (ABL)

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HEA Schools Health Education Unit

The Exeter databank of health-related behaviour

WE TEACH THEM HOW TO DRINK!

JOHN BALDING

Director, HEA Schools Health Education Unit

Based on a paper presented at a conference organised by
The Institute of Alcohol Studies
on
Alcohol, Young People, and Health Education
6 July 1989

1989

ISBN 85068 108 1

This map shows the number of schools and pupils in different regions of the UK which used the Health Related Behaviour Questionnaire in 1988. In all, 188 schools and 33,459 pupils used the service.

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The Health Related Behaviour Questionnaire

For over a decade, the HEA Schools Health Education Unit at Exeter University has been providing a survey service for upper middle and secondary schools in the UK. This enables a school to discover the health-related behaviour of its pupils, so that programmes in Health and Social Education may be made more appropriate in timing and content.

The behaviours measured using the Health Related Behaviour Questionnaire include the following:

AIDS	Mental health
Alcohol consumption	Money
Dental care	Physical activity
Diet	Road use
Drugs	Self-esteem
Homework	Sharing problems
Hygiene	Smoking
Jobs	Social activities
Leisure pursuits	Time to bed/time up
Medication	TV, videos, etc.

The content of the Health Related Behaviour Questionnaire is under regular scrutiny, and from time to time new questions are added — usually in response to prompts from users — and little-used ones are removed.

How is the data collected?

The way in which the questionnaire is used is entirely different from the style of most 'national surveys'. Typically, when planning a national survey, the smallest sample that will give reliable information about a representative cross-section of the community is chosen. Each annual sample from the Health Related Behaviour Questionnaire, on the other hand, is an 'opportunity sample', in that the Schools Health Education Unit exercises little or no control over which schools and which parts of the country become involved.

The method has been criticised on this basis, and because it is an important issue I should like to make a few remarks in its defence before expecting readers to give full weight to the results. In doing so it may open their eyes to the dangers of accepting 'statistics' uncritically.

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The sample

Choosing a sample on paper, and deriving data from that sample, are different things. In practice, every collection of results is to some extent an 'opportunity sample', particularly where schools are concerned, as many decline the invitation to be included in the survey. Our 1988 data contains the results from 33,459 pupils in 188 schools, 153 being contained in 14 group surveys. The distribution is shown in the map on page 2.

The sample selected by schools is required to reflect the academic cross-section of the year group, which is straightfoward if the questionnaire is administered during non-streamed time. As a result, the database accurately represents the community within large numbers of comprehensive schools or upper middle schools, which in most places offer a coherent sample of their catchment area. If schools select the recommended sample of the year group (see opposite), the total effective sample represented in these figures will be considerably larger than the number of questionnaires processed — equivalent to *over 100,000 boys and girls* in England in 1988, which is a very large sample indeed.

What the survey has produced, therefore, is excellent representation of the regions concerned, although the regions themselves are unevenly represented. The interesting thing is that consecutive annual samples, containing different regional representation, show for the most part excellent consistency. An important conclusion to be drawn from our work is that most aspects of the health-related behaviour of young people are at least as sensitive to circumstances *in the immediate community* as to their geographical location in the British Isles.

The two following tables present some statistics about the 1988 sample.

The different catchment areas of the schools in the 1988 sample

Rural	*Suburban*	*Urban*	*Inner urban*	**In 1988 sample**
100%	–	–	–	**13%**
75%	25%	–	–	**6%**
50%	40%	10%	–	**13%**
10%	50%	40%	–	**35%**
–	40%	50%	10%	**20%**
–	10%	40%	50%	**5%**
–	–	25%	75%	**2%**
–	–	–	100%	**5%**

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The percentage of ethnic minorities in the 1988 sample

Ethnic minority in the school	Schools in 1988 sample
0–1%	70%
2–5%	18%
6–10%	3%
11–15%	2%
16–20%	2%
21–30%	1%
31–40%	2%
41–50%	1%
>50	1%

Successive year groups — does one predict the next?

Examination of the figures for succeeding annual statistics on pages 14–19 shows that despite the lack of control over where the opportunity sample is gathered, one year's results are a good predictor of the next year's results — at least for alcohol statistics. For example, the average consumption in units by the 'drinkers' during the past week in each year group is in remarkably good agreement. Scanning the tables one may discover particular values that appear higher or lower than expected, but these only serve to emphasise the overall consistency. Data of this quality and quantity cannot be ignored.

Differences between sexes and between regions

The figures presented in this document show clear differences between boys and girls on a nationwide scale. In the group surveys organised by LEAs and DHAs, comparisons between the behaviour of children from schools grouped according to geographical location provide information for health care planning in different neighbourhoods. This is in addition to the data the authorities already hold, gathered from other sources.

The sample size and its selection

In order to discover a reliable picture of the behaviour of the total year group in a school it is not necessary to include every individual in the sample (although in some schools the decision has been taken to include every individual so that no one feels they have been excluded). The research method used to establish the size of the sample was to carry out the survey of a total, and very large year group numbering around 450 individuals, fairly evenly split between the sexes. By taking many random samples of different sizes and comparing the results for each of these with the results of the total year group it was established that, for this large

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year group, a sample size of 50 of each sex provided a reliable reflection of the total population for most questions; for some questions in fact, a smaller sample was adequate. This represents a sample size of just over 22%.

The health of individuals is known to be linked to their socio-economic status (Whitehead, M., *The Health Divide*, HEC, London 1987). Links between academic success at school and social background have also been established (Lawton, D., *Social class, language, and education*, Routledge and Kegan Paul, 1968). Therefore, to attempt to accommodate this factor in the sampling method, the stated instruction is to select the sample to 'reflect the academic profile of the year group'.

As nearly all surveys have been carried out on year groups which are much smaller than 450, a sample size of 100 selected from these represents a much larger percentage sample than the 22% random sample found adequate in the pilot work. This, coupled with the attention paid to selecting a sample which reflects the academic profile of the year group, gives even more confidence in the extent to which the sample data reflects that of the total year group.

Which classes should be selected?

In order to meet the requirement of representing the academic profile of the year group, some schools carry out the survey in lesson time when the classes are organised as 'mixed ability'. This is not always convenient and other strategies may be more appropriate. Essentially, the data returned to the school represents the outcome of the classes surveyed, and this will be known in the school.

Who should supervise it?

It is obvious that teachers who are interested in the outcome of the survey are the best motivated to follow the guidelines of the questionnaire administration. Often, staff other than the co-ordinator will be used, and it is vital that these staff are fully briefed before they are asked to supervise completion of the questionnaire. One comment we received from a supervising teacher who was clearly positive in giving support was, sadly, *I wish I had seen the questionnaire before supervising it!*

Where to supervise it?

Most commonly the questionnaire is completed in one class of 30 or less, supervised by one teacher. To establish a feeling of importance about the exercise and to create a serious yet supportive atmosphere is helpful; a teacher who is known and respected by the class is to be recommended. On occasion a whole year group sample has carried out the exercise in one large hall under the supervision of several teachers with one leading.

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How long does it take, and how difficult is it?

The average time for completion of Version 11 has been calculated as follows:

6th year (16+)	*35 minutes*
5th year (15+)	*45 minutes*
4th year (14+)	*45 minutes*
3rd year (13+)	*50 minutes*
2nd year (12+)	*60 minutes*
1st year (11+)	*70 minutes*

From the above statistics it is apparent that the younger groups find more difficulty than the older ones. In the light of this, some schools have hesitated to include the 1st-year pupils in their surveys, although they are of course a most important group from which to gather baseline information. The 11-year-olds find the most difficulty with the task and need the most support; it is usually unlike anything else they have attempted and the quality of the information collected from them in terms of its validity is less than that of the older groups who have little difficulty in understanding both the content and the total exercise. With respect to 1st-year surveys in secondary schools, a summer term timing for them is probably wise since by this time they will have settled down in the new environment.

Typically most boys and girls of all ages find the experience enjoyable and interesting, and it promotes a lot of discussion.

Surveying the less able

The more academically able and the more experienced the pupils are, the easier they find the completion of the questionnaire. But what about the difficulties of the least able? Where they have been present amongst all ranges of ability, schools have provided additional support within the room to meet their problems. Their difficulties can be a source of embarrassment, however: many schools have made separate provision for small groups withdrawn from the sample selected, and have modified the Supervisor's Guide recommendations and timings to suit their own understanding of the most appropriate method of catering for the least able.

Some schools have excluded the least able from the survey, but certainly not because they see them as less important. Instead, the observation has been made that in these schools a high level of special attention is given to this particular group, and the teachers already know far more about these individuals than they do about any other group.

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Taking back the data

The survey method may well be unique. It is not uncommon in survey procedure for those collecting the data from the respondents to disappear with it and never deliberately reveal it to those who have given assistance in the enquiry, publishing discoveries based on it in professional journals, only read by their peers. The Health Behaviour Survey Method, however, is provided as a service to schools *with the precise contract to return the results to the schools concerned.* Those who collect the raw data and who participate in the conditions under which the children completed the questionnaire examine the returned summarised results; furthermore, data returned is intended for use, and often is used with classes of boys and girls who either participated in providing it or are close in age to those who did and live in the same catchment area. What other surveys feed data back for the deliberate purpose of its being scrutinised by those who provided it? The opportunity to discover problems in interpretation, memory and other sources of unreliability is unique.

Interviews

As a result of this methodology there is opportunity for the schools themselves to discover problems in interpretation and memory. A standard practice has also been, throughout the evolution and development of the method, to interview individual boys and girls following their completion of the questionnaire under the conditions set by a teacher supervisor working from the prescribed method. Since the beginning of the work over 100 different interviewers have participated in this activity. The routine practice involves a team of about eight people experienced in working with young people, some of whom are student teachers and fairly close in age to the schoolchildren, being introduced to the class near the end of the time in which they have been completing the questionnaire.

The team leader explains something of the difficulties of question design and asks for assistance from class members. Examination in the class of one or two difficulties that all can participate in is succeeded by private and confidential interviews between individual members of the class and of the visiting team. The interviewer asks permission to examine the completed questionnaire with the boy or girl and to make notes on it if necessary. The interviewer is particularly looking for misinterpretations, problems of memory, and problems of unreliability arising from children presenting answers which (1) may present them in a better light than is reality or (2) are intended to shock the reader.

Exchanges between team members and supervising staff on these visits are also very valuable in highlighting supervision problems and methods by which they have been or might be resolved which can be passed on to future users. Following the interview excursion the team members, equipped with their annotated completed questionnaires, share in a 'blow-by-blow' discussion of each question. This is an exhausting and exhaustive process by which the knowledge of the quality of each question can be built

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up and necessary amendments effected in the next version. Added to this is all the written commentary provided by the routine completion of the Supervisor's Notes supplied with the questionnaires.

Validating the questions

The above processes shape the quality of each individual question. One observation to be made is that the longer a question has been contained in the questionnaire the more will be known about it and the more valid are the answers to it likely to be. The level of confidence in the most recently-included questions will be less than for the long-standing questions. The most recently-included questions have been those in connection with illegal drugs, AIDS, and mental health.

There is one question which is known to produce unreliable data, and yet it is retained. It involves memory recall of vaccinations, question number 37 in Version 11. In earlier versions usually more than 50% of boys in most groups would report that they had been vaccinated against Rubella infection; at the time there was no policy anywhere in the UK of vaccinating boys for this disease, although there is now. The purpose of its presence is twofold: (1) its presence has been requested by District Community Physicians for comparison with other records they hold, (2) it raises the issue of the desirability of enabling people to remember or keep records to hand of their history of vaccinations. Schools in receipt of returned survey data need to be warned of this known level of reliability for this particular question.

The overall quality of the data gathered

The question is often raised: *Do pupils report on their own behaviour in a reliable manner?* Factors affecting this problem include errors of memory, and therefore most of the questions are about *recent* behaviour. Bias can also arise if pupils either want to please, and give the answer they expect the questioner to approve of, or to annoy by giving an answer which is expected to disturb the questioner.

The manner in which the data is collected is also vital. With the best possible sample and the best-researched instrument, the value of the data is questionable if the respondent does not enter properly into the spirit of the enquiry. Large numbers of unanswered questions or abused questionnaire scripts signal a doubtful procedure. One great strength of the Health Related Behaviour Questionnaire is that it is not administered by or on behalf of an external agency, but by the school itself, anxious to derive a set of valid results on which to base curriculum improvements. If a school volunteers to fit the questionnaire administration into its already crowded timetable, then it is serious about the enquiry, and this commitment will be transmitted to the pupils.

If the children know that the questionnaires are completely confidential, that they will immediately be sealed in envelopes to be sent away for

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processing, and that the results will be returned only as a summary in which no individuals can be identified, their motivation to be honest will be reinforced. If, in addition, they feel that what they are doing is important for themselves — that it will affect the work they do in school to their own benefit — they will answer the questions as conscientiously as possible.

A school's own survey results

A routine part of the service is to return summarised data to each school in bound, indexed volumes together with guidelines to the interpretation of the tables of statistics. Each school participating in a group project will receive their separate confidential reports. The aim is to return the processed data within 4–6 weeks.

Many group projects have a post-survey seminar in order to examine the data, to aid teachers with interpretation of the data, and to study their data in the light of results from other schools in their area. A typical programme would include the following:

- *Interpretation of the data*
- *Dissemination to colleagues in school*
- *Curriculum planning from the data*
- *Dissemination to pupils*
- *Use of combined area data*

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"You teach them how to drink!"

The histograms on pages 14 and 15 depict the consumption of named drinks by boys and girls of different ages and the sources of these drinks during the week in 1988 prior to completion of the questionnaire.

From these pictorial presentations it is abundantly obvious that the consumption of alcohol by some children does not begin at the age of 11 years, but at an earlier age. From the data on pages 16 and 17 we see that the percentages of boys and girls in the 11+ age group reporting drinking any alcoholic beverage in the past week were:

	1984	1985	1986	1987	1988
Boys	57	60	50	54	54
Girls	35	39	36	38	36

When do they begin tasting alcohol on a regular (say, weekly) basis? In response to requests from primary sector teachers interested in finding out more about younger children's lifestyles, we have piloted the Primary Health Related Behaviour Questionnaire, and its use will soon indicate the levels and frequency of alcohol consumption in these earlier and critical years.

Data similar to that depicted on pages 14 and 15 has been presented to audiences including parents and teachers on many occasions, once on a *Panorama* programme. This section is based on our experience of many different meetings: the usual technique is to present the histograms in four stages, as follows...

STAGE 1 — Starting with shandy

The histograms showing shandy consumption during the previous week are displayed and the meaning of each column as a percentage is carefully described. It is then shown that there are noticeable differences in the percentages consuming shandy, (1) between boys and girls and (2) between the different school year groups. (From the figures shown here for 1988, fewer girls drink shandy than boys, and the popularity of shandy shows an increase between the first two year groups and thereafter declines steadily.)

The method of data collection and the validity of the data is discussed, and the personal responses of audience members are invited.

STAGE 2 — Getting stronger

Predictions of figures for other alcoholic beverages are invited from the audience prior to the examination of the histograms for beer, cider, wine, fortified wine and spirits. Histograms for all these named beverages are then examined and debated.

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STAGE 3 — Home as the source

Where are they getting it from?

This is the question now posed to the audience. They provide the whole range of possibilities before the histograms depicting the home as the main source are revealed.

On revealing the figures for the home as the source the following question is posed:

How are you feeling about this?

The feelings generated by this approach include those of anger, as many feel that they are being accused of being irresponsible, and typically within 20 seconds of posing the question a parent will express their view or practice in the following way:

Surely, in a society where alcohol is so abundant, the safest place to teach your child how to drink is the home?

The tension raised by the question and the manner in which it was presented noticeably decreases, and a feeling spreads amongst those present that this is indeed the reason why children drink alcohol at home. The discussion that follows, however, usually reveals that the policy at home is particularly unclear and rarely discussed.

At this point in the meeting it is appropriate to examine the school's own alcohol education policy. Typically this is well considered, but is couched in terms of 'enabling young people to consider the sensible and responsible use of alcohol'. Consonant with the parents' attempts, it appears that teachers also teach the children how to drink.

(My comment at this stage is that when journalists ask me why children drink, I sometimes — somewhat irresponsibly — reply that both parents and teachers teach them how to, so they have little chance of not doing so, and anyway it's nice.) So the major issue raised by the data is not so much how or why do they drink, but...

Do we have to start teaching them when they are so young?

STAGE 4 — A positive outcome

The remaining histograms are examined and discussed. Access to pubs and off-licences in the experience of those present is described and many positive aspects of caring licencees and others are always given as examples of approved practice.

One very positive outcome has emerged on several occasions. Parents often recognise that teachers in schools care greatly about the welfare of the young people in their charge, and the level of the preparation that has gone into the policy and practice in the school is very reassuring to those parents present. The recognition that the home policy is not clear often emerges spontaneously at the meeting, or it can be raised.

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The most positive outcome I have experienced was at a meeting of parents and teachers at a *primary school*. To them, alcohol education was the concern of secondary schools until it became clear from the data that their children must already be learning how to drink alcohol before commencing secondary education, anticipating its role in a 'grown-up' lifestyle. One outcome was to promote collaboration between parents and teachers so that home policies would become consonant with school policies.

These results do provide a very real and stimulating agenda to begin a debate with parents and teachers. It is probably a good idea to use nationwide data from the Exeter data banks to start with, and then to proceed to their own survey. To have meetings with parents following surveys of health behaviour over a wider range can bring parents and schools together in this desirable exercise of formulating policies for home and school.

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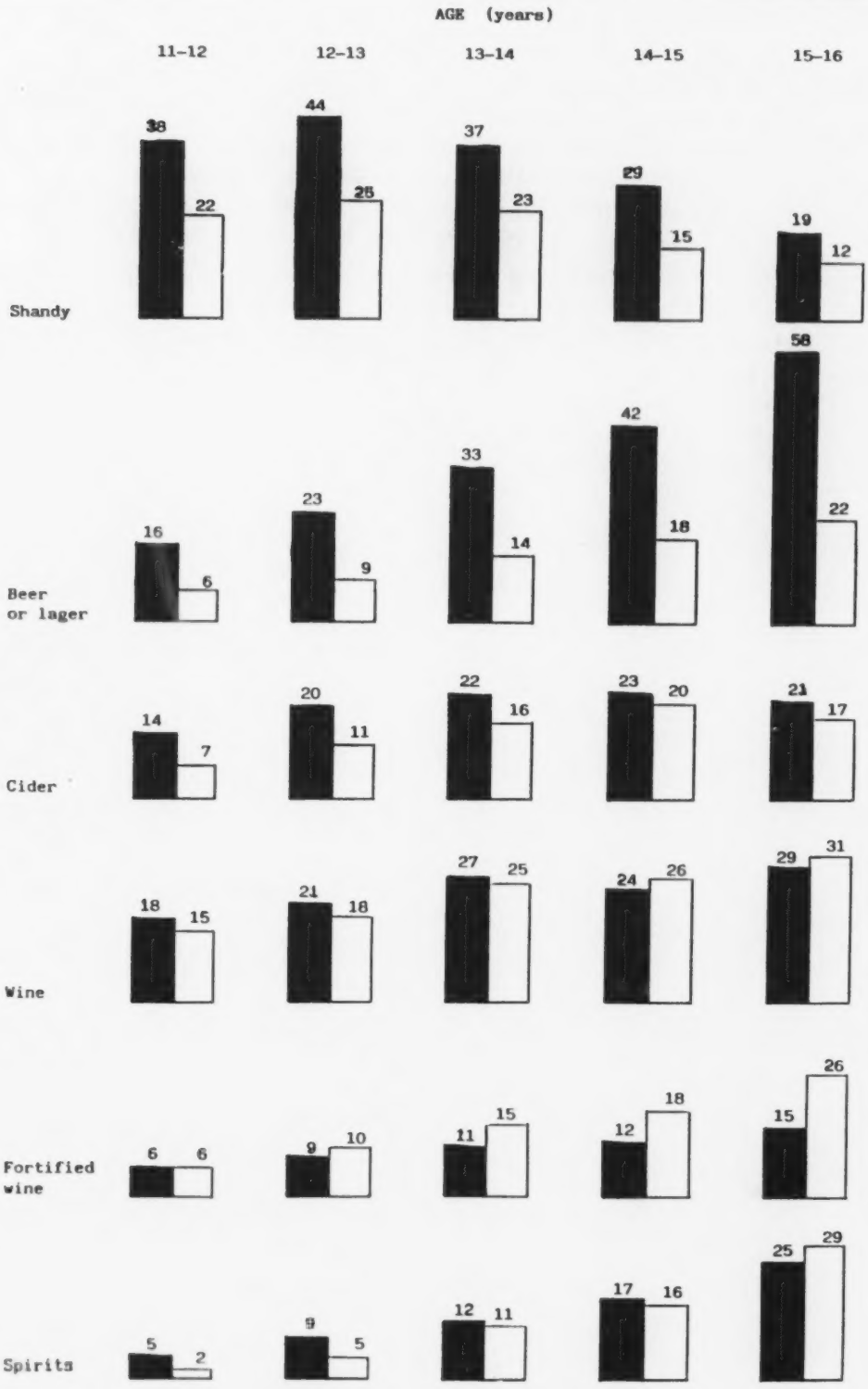

The percentage of boys ■ and girls □ who consumed any of these different alcoholic drinks during the previous seven days

This is 1988 data and represents the responses of 17,006 boys and 16,453 girls.

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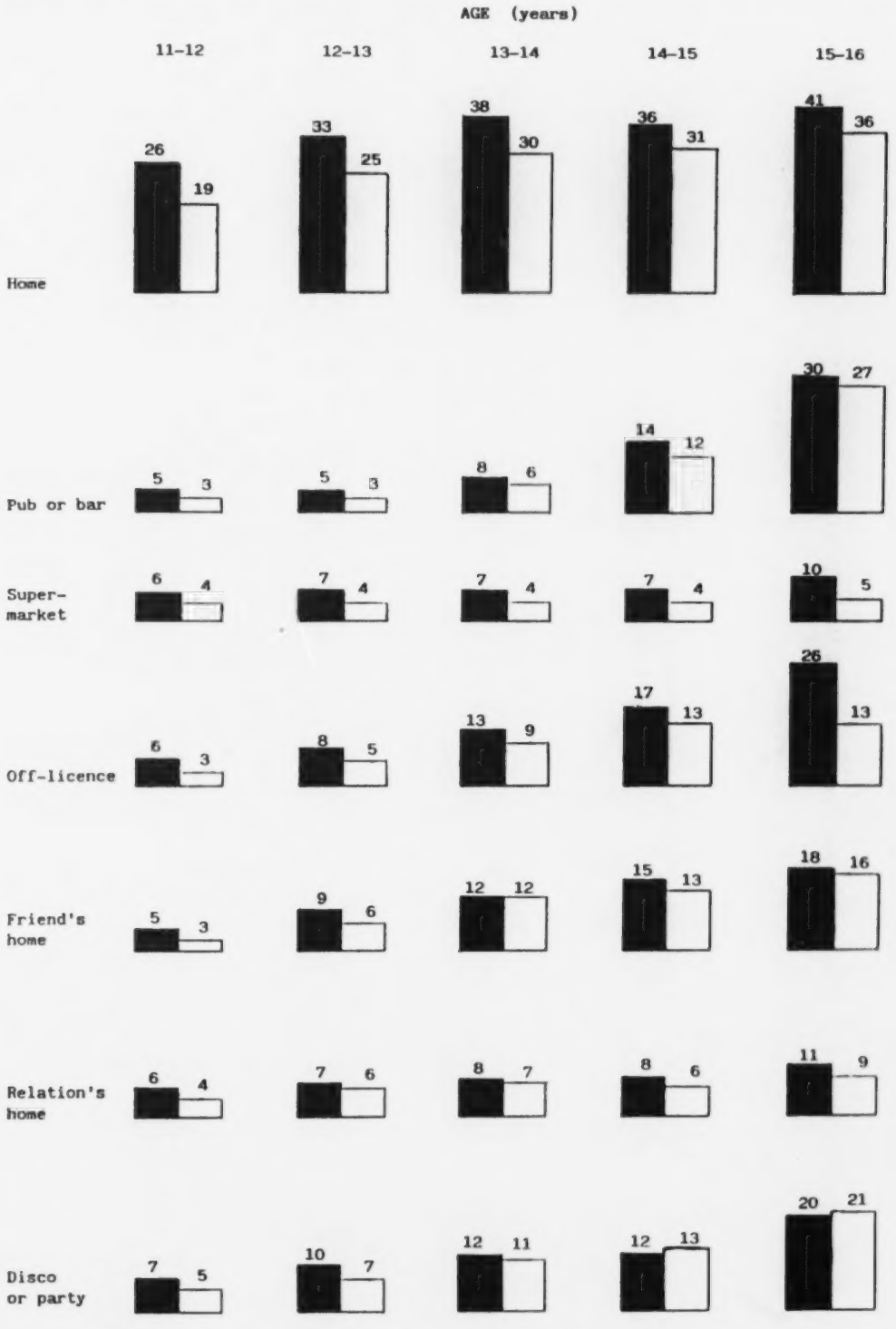

The percentage of boys ■ and girls □ who obtained alcoholic drinks from any of these sources during the previous seven days

This is 1988 data and represents the responses of 17,006 boys and 16,453 girls.

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Statistics prepared from the databanks held at Exeter University for the years 1984, 1985, 1986, 1987, 1988

CONSUMPTION OF ALCOHOLIC BEVERAGES BY BOYS 'DURING THE PREVIOUS 7 DAYS'

Total sample size: 11,471 (1984), 6,518 (1985), 9,245 (1986), 9,407 (1987), 17,006 (1988)

Percentage consuming alcoholic beverages

School year (age)	1 (11+)					2 (12+)					3 (13+)					4 (14+)					5 (15+)				
Data for year	84	85	86	87	88	84	85	86	87	88	84	85	86	87	88	84	85	86	87	88	84	85	86	87	88
Any beverage	57	60	50	54	54	66	63	61	59	63	69	72	67	64	69	75	76	70	68	69	72	79	73	73	77
Shandy	42	41	34	39	38	42	39	38	39	44	38	40	35	35	37	31	34	30	32	29	21	19	18	23	19
Beer/lager	19	17	16	15	16	23	26	23	23	23	33	34	32	31	33	47	44	41	41	42	53	57	54	52	58
Cider	19	15	12	15	14	20	17	16	19	20	25	25	20	23	22	28	26	21	23	23	24	25	19	24	21
Wine	14	20	15	23	18	17	19	20	22	21	19	24	24	22	27	21	23	21	24	24	18	29	22	28	29
Fortified wine	7	8	6	10	6	10	9	9	9	9	9	9	10	10	11	12	11	11	11	12	12	13	10	12	15
Spirits	5	5	4	6	5	8	9	8	7	9	11	12	12	11	12	18	19	14	15	17	23	28	25	22	25

Mean number of alcohol units* consumed by 'drinkers' during the previous 7 days

Units of alcohol	4	3	3	4	4	5	4	4	4	4	6	5	6	6	6	8	7	7	7	8	10	10	10	10	11

* Equivalent to 1 pint of shandy, 1/2 pint of beer, lager, or cider, 1 glass of wine or fortified wine, 1 measure of spirits

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Statistics prepared from the databanks held at Exeter University for the years 1984, 1985, 1986, 1987, 1988

CONSUMPTION OF ALCOHOLIC BEVERAGES BY GIRLS 'DURING THE PREVIOUS 7 DAYS'

Total sample size: 9,854 (1984), 6,713 (1985), 9,139 (1986), 9.000 (1987), 16,453 (1988)

Percentage consuming alcoholic beverages

School year (age)	1 (11+)					2 (12+)					3 (13+)					4 (14+)					5 (15+)				
Data for year	84	85	86	87	88	84	85	86	87	88	84	85	86	87	88	84	85	86	87	88	84	85	86	87	88
Any beverage	35	39	36	38	36	45	44	47	41	45	54	62	58	53	56	62	65	63	58	59	62	71	66	65	69
Shandy	25	21	21	22	22	29	24	26	24	25	26	29	24	23	23	21	23	19	17	15	15	12	11	9	12
Beer/lager	4	5	4	6	6	6	10	8	6	9	11	15	15	15	14	18	17	20	18	18	19	21	21	16	22
Cider	9	7	7	6	7	13	11	10	10	11	18	19	15	17	16	22	23	18	20	20	19	25	19	12	17
Wine	7	16	12	17	15	13	16	20	19	18	17	27	24	25	25	19	25	26	27	26	20	25	27	29	31
Fortified wine	5	8	6	8	6	10	9	9	9	10	14	17	15	15	15	20	20	20	17	18	23	26	29	26	26
Spirits	2	2	3	3	2	4	5	4	4	5	7	12	9	11	11	14	15	14	14	16	19	26	29	25	29

Mean number of alcohol units* consumed by 'drinkers' during the previous 7 days

Units of alcohol	2	2	2	3	3	3	3	3	3	3	4	4	4	5	4	5	5	5	5	5	6	6	6	6	7

* Equivalent to 1 pint of shandy, 1/2 pint of beer, lager, or cider, 1 glass of wine or fortified wine, 1 measure of spirits

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Statistics prepared from the databanks held at Exeter University for the years 1984, 1985, 1986, 1987, 1988

PERCENTAGE OF BOYS IN EACH YEAR GROUP WHO OBTAINED ALCOHOL FROM ANY OF THE NAMED SOURCES DURING THE PREVIOUS SEVEN DAYS

Total sample size: 11,471 (1984), 6,518 (1985), 9,245 (1986), 9,407 (1987), 17,006 (1988)

School year (age)	1 (11+)					2 (12+)					3 (13+)					4 (14+)					5 (15+)				
Data for year	**84**	**85**	**86**	**87**	**88**	**84**	**85**	**86**	**87**	**88**	**84**	**85**	**86**	**87**	**88**	**84**	**85**	**86**	**87**	**88**	**84**	**85**	**86**	**87**	**88**
Home	27	28	27	31	26	32	32	31	34	33	37	38	37	34	38	38	40	37	35	36	35	42	33	36	41
Pub or bar	8	5	4	6	5	7	7	6	6	5	11	10	8	10	8	19	17	15	15	14	32	27	30	28	30
Supermarket	9	8	7	8	6	10	5	8	6	7	8	10	7	7	7	8	9	8	7	7	7	8	7	9	10
Off-licence	9	9	5	8	6	9	8	6	6	8	12	9	10	11	13	19	14	14	19	17	21	19	19	28	26
Friend's home	5	5	4	5	5	8	8	7	7	9	10	10	10	11	12	14	15	13	14	15	16	17	14	16	18
Relation's home	6	5	5	7	6	8	4	5	7	7	8	7	7	7	8	9	7	7	8	8	6	6	5	8	11
Disco or party	8	8	7	8	7	9	10	8	12	10	11	13	10	14	12	15	16	12	15	12	17	25	17	22	20
% drinking any beverage during previous 7 days	**57**	**60**	**50**	**54**	**54**	**66**	**63**	**61**	**59**	**63**	**69**	**72**	**67**	**64**	**69**	**75**	**76**	**70**	**68**	**69**	**72**	**79**	**73**	**73**	**77**

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Statistics prepared from the databanks held at Exeter University for the years 1984, 1985, 1986, 1987, 1988

PERCENTAGE OF GIRLS IN EACH YEAR GROUP WHO OBTAINED ALCOHOL FROM ANY OF THE NAMED SOURCES DURING THE PREVIOUS SEVEN DAYS

Total sample size: 9,854 (1984), 6,713 (1985), 9,139 (1986), 9,000 (1987), 16,453 (1988)

School year (age)	1 (11+)					2 (12+)					3 (13+)					4 (14+)					5 (15+)				
Data for year	84	85	86	87	88	84	85	86	87	88	84	85	86	87	88	84	85	86	87	88	84	85	86	87	88
Home	17	20	18	21	19	22	25	27	25	25	29	34	33	30	30	31	34	34	29	31	28	32	31	31	36
Pub/bar	2	3	2	2	3	6	2	4	3	3	7	8	6	9	6	16	13	14	13	12	26	27	28	26	27
Supermarket	5	4	5	3	4	5	4	4	3	4	5	6	4	5	4	4	6	4	5	4	4	5	5	5	5
Off-licence	2	3	2	3	3	5	6	5	2	5	7	7	6	7	9	11	10	9	12	13	9	10	10	13	13
Friend's home	4	2	3	3	3	5	6	6	5	6	8	10	9	9	12	12	13	12	12	13	11	15	13	14	16
Relation's home	4	5	4	4	4	5	6	6	5	6	7	7	7	6	7	6	6	6	6	6	5	7	5	7	9
Disco/party	7	5	4	6	5	8	6	6	7	7	13	16	11	13	11	17	18	15	16	13	18	29	20	24	21
% drinking any beverage during previous 7 days	35	39	36	38	36	45	44	47	41	45	54	62	58	53	56	62	65	63	58	59	62	71	66	65	69

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Alcohol use by young people aged 14+ in 1988

This section is based on the reported behaviour of 530 4th-year boys and 560 4th-year girls in 1988. They represent a 10% random sample of the total 4th-year data processed for the year. It presents statistically significant Spearman correlations (ρ) between the total intake of alcohol in units in the past week and other selected variables in the questionnaire.

Version 11 of the general Health Related Behaviour Questionnaire, from which these statistics were derived, contained a very wide range of questions, as follows:

Alcohol consumption	Money
Dental care	Physical activity
Diet	Road use
Drugs	Self-esteem
Homework	Sharing problems
Hygiene	Smoking
Jobs	Social activities
Leisure pursuits	Time to bed/time up
Medication	TV, videos, etc.

(Version 12, now in use, contains sections on AIDS and mental health.)

From all the data accumulating each year an obvious research procedure to adopt is to look for correlations between behaviours. For 4th-year boys and girls we have looked for correlations between alcohol consumed in the past week and all the other behaviours reported in the questionnaire surveys, and the most interesting are presented here.

The numerical value of a correlation can vary from -1 to $+1$, the negative sign indicating that an increase of one variable correlates with a decrease of the other variable, and the positive sign that as one variable increases so does the other. A statistical test is also applied to each correlation calculation and the statistical significance level of the test is shown in the tables under σ; the lower the value of σ, the less likely is it that the result could have occurred by chance through the sample selected. A significance value of .05 would mean that in 5 times out of 100 we could expect the result to have happened by chance; the significance values in the tables are typically much lower than .05, often less than .001, or a probability of less than 1 in 1000 that the correlation was by chance.

The correlation calculation is a mathematical process, and does not necessarily mean that

(1) *because two behaviours are correlated they necessarily are connected,*

or that

(2) *one behaviour is the cause of the other.*

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Many behaviours, however, do fit expected connections: for example, the more days in the week that alcohol was drunk the higher was the total consumption, a very high positive correlation of +.89 for boys and +.91 for girls being found; here one may reasonably be regarded as causally related to the other. In other examples with lower but substantial and significant correlation values, for example spending money on slot machines, one may comment that these two activities are often possible in pubs, clubs, and bars where alcohol is available. Therefore the discovery of a correlation of +.22 for boys and +.19 for girls comes as no surprise.

Alcohol consumption and road use

	BOYS		*GIRLS*	
Other variable	ρ	σ	ρ	σ
Frequency of riding motorcycles	+.31	.000	+.30	.000
Intend to own a moped	+.19	.000	+.27	.000
Have driven a car	+.29	.000	+.25	.000
Use seat belt	−.27	.000	−.25	.000

Significant correlations shown in the table suggest positive connections between alcohol use and motorcycling, intending to own a moped (higher for girls) and having tried driving a car. The significance of the new-found independence that comes with owning your own powered transport and with passing a driving test is enormous in the process of growing up; the use of alcohol is perceived as a 'grown-up' activity.

This table also shows a significant negative correlation between frequency of fastening the safety belt when sitting in the front passenger seat of the car and level of alcohol consumed. Lack of attention to personal safety either on the part of the 'heavier' 4th-year drinkers, or on the part of the adults who care for them, or those who drive the cars in which they are passengers, seems to be indicated.

Alcohol consumption and socially-related variables

	BOYS		*GIRLS*	
Other variable	ρ	σ	ρ	σ
Have a boy/girlfriend	+.24	.000	+.21	.000
Confident with opposite sex	+.30	.000	+.17	.000
Have friends of opposite sex	+.20	.000	+.21	.000
Go to discos	+.25	.000	+.17	.000

Positive connections between levels of alcohol use and behaviours linked with relationships with the opposite sex are discovered. Thus the correlation links were between more friends of the opposite sex, greater confidence in their presence, actually having a 'boyfriend' or a 'girlfriend', and on discos as an activity.

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Alcohol consumption and hygiene variables

	BOYS		*GIRLS*	
Other variable	ρ	σ	ρ	σ
Frequency of washing hair	+.16	.000	+.21	.000
Toilet hygiene	−.17	.000	−.15	.000

Both these associations are probably linked with the more socially active aspect of the 'heavier' drinkers. They are more likely to wash their hair more frequently and yet less likely to wash their hands after visiting the toilet — perhaps the facilities in the pubs, clubs, and discos which they frequent do not always provide adequate washing facilities. (It is worth noting that although the correlations are on the low side they are highly significant.)

Alcohol consumption and the home

	BOYS		*GIRLS*	
Other variable	ρ	σ	ρ	σ
Doing homework	−.11	.014	−.11	.009
Bedtime	+.15	.000	+.21	.000

Fairly low levels of correlation, albeit statistically significant, point to less time being spent on homework and later times of going to bed. Socially-active youngsters spending more time out from their homes could be the basis of an explanation for the statistics.

Alcohol consumption and food/eating/diet

	BOYS		*GIRLS*	
Other variable	ρ	σ	ρ	σ
Eating chips	+.14	.002	—	—
Eating burgers	+.19	.000	—	—
Eating sausages	+.17	.000	—	—

Correlations with the many foods listed in the questionnaire were only discovered for the three in the above table, and then just for boys. Are boys who drink more likely to eat 'junk' food?

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Alcohol consumption, drugs, and self-medication

	BOYS		*GIRLS*	
Other variable	ρ	σ	ρ	σ
Take painkillers	+.17	.000	+.20	.000
Cigarettes in past week	+.28	.000	+.34	.000
Been offered illegal drugs	+ve	*Yes*	+ve	*Yes*
Know source of illegal drugs	+ve	*Yes*	+ve	*Yes*
Seen illegal drugs used	+ve	*Yes*	+ve	*Yes*

When the statistic concerning use of painkillers is seen it always promotes the question: ***Is it to do with hangovers?*** Smokers are more likely to be consumers of alcohol. Connections with illegal drugs exposure are also statistically significant although the correlation values are low.

Alcohol consumption and sports activities outside school

	BOYS		*GIRLS*	
Other variable	ρ	σ	ρ	σ
Rugby	+.13	.003	—	—
Hockey	+ve	*Yes*	—	—
Wind surfing	+ve	*Yes*	—	—
Skateboards	+ve	*Yes*	—	—
Skiing	+ve	*Yes*	—	—
Aerobics	—	—	+ve	*Yes*

Sports clubs are often linked with club bars, and for the boys statistically-significant correlations, mostly at very low level, are found. For the girls the only one discovered is connected with participating in aerobics.

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Conclusion

Perhaps the pattern we may see in the above sets of tables comes as no surprise. To be outgoing, to be sociable, and to take risks are normal aspects of adolescent peer group activity.

A whole lifestyle is suggested by the connections between behaviours, so how can 'topic type' health education work? In our alcohol education (smoking education, diet education, fitness education, and so on), what are we trying to do? Can any of these initiatives be expected to work in isolation? Are we actually trying to persuade young people to change their lifestyles, and is this too big a step to offer hope of much success?

If adolescence is about practising to be an adult, can adult practices be changed? Will a shift in adults' attitudes towards non-alcoholic and low-alcohol drinks pass itself on to the teenager? Some teachers suspect that this is happening, but it has yet to show up in our databanks of statistics. However, we hungrily anticipate searching the 1989 responses!

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U.S. Dept. of Education

Office of Education
Research and
Improvement (OERI)

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Date Filmed

March 29, 1991